

#2



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RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/10/055,430

TIME: 19:32:52

Input Set : N:\Crf3\RULE60\10055430.txt

Output Set: N:\CRF3\02132002\J055430.raw

7 <110> APPLICANT: Rangel-Aldao, Rafael
 9 Bravo, Adriana
 11 Sanchez, Beatriz
 13 Galindo-Castro, Ivan
 17 <120> TITLE OF INVENTION: Malt Beverage Having Stabilized Flavor and Methods of
 Production
 19 Thereof
 23 <130> FILE REFERENCE: 1390.0070004
 29 <140> CURRENT APPLICATION NUMBER: 10/055,430
 32 <141> CURRENT FILING DATE: 2002-01-25
 34 <150> PRIOR APPLICATION NUMBER: 09/150,347
 36 <151> PRIOR FILING DATE: 1998-09-09
 40 <150> PRIOR APPLICATION NUMBER: 60/058,398
 43 <151> PRIOR FILING DATE: 1997-09-09
 52 <160> NUMBER OF SEQ ID NOS: 6
 58 <170> SOFTWARE: PatentIn Ver. 2.0
 64 <210> SEQ ID NO: 1
 67 <211> LENGTH: 400
 70 <212> TYPE: PRT
 73 <213> ORGANISM: Saccharomyces carlsbergensis
 78 <400> SEQUENCE: 1

81	Met Ser Phe Val Lys Asp Phe Lys Pro Gln Ala Leu Gly Asp Thr Asn
83	1 5 10 15
85	Leu Phe Lys Pro Ile Lys Ile Gly Asn Asn Glu Leu Leu His Arg Ala
87	20 25 30
89	Val Ile Pro Pro Leu Thr Arg Met Arg Ala Leu His Pro Gly Asn Ile
91	35 40 45
93	Pro Asn Arg Asp Trp Ala Val Glu Tyr Tyr Thr Gln Arg Ala Gln Arg
95	50 55 60
97	Pro Gly Thr Met Ile Ile Thr Glu Gly Ala Phe Ile Ser Pro Gln Ala
99	65 70 75 80
101	Gly Gly Tyr Asp Asn Ala Pro Gly Val Trp Ser Glu Glu Gln Met Val
103	85 90 95
105	Glu Trp Thr Lys Ile Phe Asn Ala Ile His Glu Lys Lys Ser Phe Val
107	100 105 110
109	Trp Val Gln Leu Trp Val Leu Gly Trp Ala Ala Phe Pro Asp Asn Leu
111	115 120 125
113	Ala Arg Asp Gly Leu Arg Tyr Asp Ser Ala Ser Asp Asn Val Phe Met
115	130 135 140
117	Asp Ala Glu Gln Glu Ala Lys Ala Lys Lys Ala Asn Asn Pro Gln His
119	145 150 155 160
121	Ser Leu Thr Lys Asp Glu Ile Lys Gln Tyr Ile Lys Glu Tyr Val Gln
123	165 170 175
125	Ala Ala Lys Asn Ser Ile Ala Ala Gly Ala Asp Gly Val Glu Ile His

ENTERED

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127          180          185          190
129  Ser Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro His Ser Asn
131          195          200          205
133  Thr Arg Thr Asp Glu Tyr Gly Gly Ser Ile Glu Asn Arg Ala Arg Phe
135          210          215          220
137  Thr Leu Glu Val Val Asp Ala Leu Val Glu Ala Ile Gly His Glu Lys
139  225          230          235          240
141  Val Gly Leu Arg Leu Ser Pro Tyr Gly Val Phe Asn Ser Met Ser Gly
143          245          250          255
145  Gly Ala Glu Thr Gly Ile Val Ala Gln Tyr Ala Tyr Val Ala Gly Glu
147          260          265          270
150  Leu Glu Lys Arg Ala Lys Ala Gly Lys Arg Leu Ala Phe Val His Leu
152          275          280          285
154  Val Glu Pro Arg Val Thr Asn Pro Phe Leu Thr Glu Gly Glu Gly Glu
156          290          295          300
158  Tyr Glu Gly Gly Ser Asn Asp Phe Val Tyr Ser Ile Trp Lys Gly Pro
160  305          310          315          320
162  Val Ile Arg Ala Gly Asn Phe Ala Leu His Pro Glu Val Val Arg Glu
164          325          330          335
166  Glu Val Lys Asp Lys Arg Thr Leu Ile Gly Tyr Gly Arg Phe Phe Ile
168          340          345          350
170  Ser Asn Pro Asp Leu Val Asp Arg Leu Glu Lys Gly Leu Pro Leu Asn
172          355          360          365
174  Lys Tyr Asp Arg Asp Thr Phe Tyr Gln Met Ser Ala Trp Gly Tyr Ile
176          370          375          380
178  Asp Tyr Pro Thr Tyr Glu Glu Ala Leu Lys Leu Gly Trp Asp Lys Lys
180  385          390          395          400
187 <210> SEQ ID NO: 2
190 <211> LENGTH: 400
193 <212> TYPE: PRT
196 <213> ORGANISM: Saccharomyces carlsbergensis
202 <400> SEQUENCE: 2
205 Met Pro Phe Val Lys Asp Phe Lys Pro Gln Ala Leu Gly Asp Thr Asn
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209 Leu Phe Lys Pro Ile Lys Ile Gly Asn Asn Glu Leu Leu His Arg Ala
211          20          25          30
213 Val Ile Pro Pro Leu Thr Arg Met Arg Ala Gln His Pro Gly Asn Ile
215          35          40          45
217 Pro Asn Arg Asp Trp Ala Val Glu Tyr Tyr Ala Gln Arg Ala Gln Arg
219          50          55          60
221 Pro Gly Thr Leu Ile Ile Thr Glu Gly Thr Phe Pro Ser Pro Gln Ser
223  65          70          75          80
225 Gly Gly Tyr Asp Asn Ala Pro Gly Ile Trp Ser Glu Glu Gln Ile Lys
227          85          90          95
229 Glu Trp Thr Lys Ile Phe Lys Ala Ile His Glu Asn Lys Ser Phe Ala
231          100          105          110
233 Trp Val Gln Leu Trp Val Leu Gly Trp Ala Ala Phe Pro Asp Thr Leu
235          115          120          125
237 Ala Arg Asp Gly Leu Arg Tyr Asp Ser Ala Ser Asp Asn Val Tyr Met

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239      130      135      140
241 Asn Ala Glu Gln Glu Glu Lys Ala Lys Lys Ala Asn Asn Pro Gln His
243 145      150      155      160
245 Ser Ile Thr Lys Asp Glu Ile Lys Gln Tyr Val Lys Glu Tyr Val Gln
247      165      170      175
249 Ala Ala Lys Asn Ser Ile Ala Ala Gly Ala Asp Gly Val Glu Ile His
251      180      185      190
253 Ser Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro His Ser Asn
255      195      200      205
257 Asn Arg Thr Asp Glu Tyr Gly Gly Ser Ile Glu Asn Arg Ala Arg Phe
259      210      215      220
261 Thr Leu Glu Val Val Asp Ala Val Val Asp Ala Ile Gly Pro Glu Lys
263 225      230      235      240
265 Val Gly Leu Arg Leu Ser Pro Tyr Gly Val Phe Asn Ser Met Ser Gly
267      245      250      255
269 Gly Ala Glu Thr Gly Ile Val Ala Gln Tyr Ala Tyr Val Leu Gly Glu
271      260      265      270
273 Leu Glu Arg Arg Ala Lys Ala Gly Lys Arg Leu Ala Phe Val His Leu
275      275      280      285
277 Val Glu Pro Arg Val Thr Asn Pro Phe Leu Thr Glu Gly Glu Gly Glu
279      290      295      300
281 Tyr Asn Gly Gly Ser Asn Lys Phe Ala Tyr Ser Ile Trp Lys Gly Pro
283 305      310      315      320
285 Ile Ile Arg Ala Gly Asn Phe Ala Leu His Pro Glu Val Val Arg Glu
287      325      330      335
289 Glu Val Lys Asp Pro Arg Thr Leu Ile Gly Tyr Gly Arg Phe Phe Ile
291      340      345      350
293 Ser Asn Pro Asp Leu Val Asp Arg Leu Glu Lys Gly Leu Pro Leu Asn
295      355      360      365
297 Lys Tyr Asp Arg Asp Thr Phe Tyr Lys Met Ser Ala Glu Gly Tyr Ile
299      370      375      380
302 Asp Tyr Pro Thr Tyr Glu Glu Ala Leu Lys Leu Gly Trp Asp Lys Asn
304 385      390      395      400
313 <210> SEQ ID NO: 3
316 <211> LENGTH: 400
319 <212> TYPE: PRT
322 <213> ORGANISM: Saccharomyces carlsbergensis
328 <400> SEQUENCE: 3
332 Met Pro Phe Val Lys Gly Phe Glu Pro Ile Ser Leu Arg Asp Thr Asn
334 1 5 10 15
336 Leu Phe Glu Pro Ile Lys Ile Gly Asn Thr Gln Leu Ala His Arg Ala
338 20 25 30
340 Val Met Pro Pro Leu Thr Arg Met Arg Ala Thr His Pro Gly Asn Ile
342 35 40 45
344 Pro Asn Lys Glu Trp Ala Ala Val Tyr Tyr Gly Gln Arg Ala Gln Arg
346 50 55 60
348 Pro Gly Thr Met Ile Ile Thr Glu Gly Thr Phe Ile Ser Pro Gln Ala
350 65 70 75 80
352 Gly Gly Tyr Asp Asn Ala Pro Gly Ile Trp Ser Asp Glu Gln Val Ala

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354				85				90					95			
356	Glu	Trp	Lys	Asn	Ile	Phe	Leu	Ala	Ile	His	Asp	Cys	Gln	Ser	Phe	Ala
358				100					105					110		
360	Trp	Val	Gln	Leu	Trp	Ser	Leu	Gly	Trp	Ala	Ser	Phe	Pro	Asp	Val	Leu
362			115					120					125			
364	Ala	Arg	Asp	Gly	Leu	Arg	Tyr	Asp	Cys	Ala	Ser	Asp	Arg	Val	Tyr	Met
366		130					135					140				
368	Asn	Ala	Thr	Leu	Gln	Glu	Lys	Ala	Lys	Asp	Ala	Asn	Asn	Leu	Glu	His
370	145					150				155					160	
372	Ser	Leu	Thr	Lys	Asp	Asp	Ile	Lys	Gln	Tyr	Ile	Lys	Asp	Tyr	Ile	His
374				165						170					175	
376	Ala	Ala	Lys	Asn	Ser	Ile	Ala	Ala	Gly	Ala	Asp	Gly	Val	Glu	Ile	His
378				180					185					190		
380	Ser	Ala	Asn	Gly	Tyr	Leu	Leu	Asn	Gln	Phe	Leu	Asp	Pro	His	Ser	Asn
382			195					200					205			
384	Lys	Arg	Thr	Asp	Glu	Tyr	Gly	Gly	Thr	Ile	Glu	Asn	Arg	Ala	Arg	Phe
386		210					215					220				
388	Thr	Leu	Glu	Val	Val	Asp	Ala	Leu	Ile	Glu	Thr	Ile	Gly	Pro	Glu	Arg
390	225					230					235				240	
392	Val	Gly	Leu	Arg	Leu	Ser	Pro	Tyr	Gly	Thr	Phe	Asn	Ser	Met	Ser	Gly
394				245						250				255		
396	Gly	Ala	Glu	Pro	Gly	Ile	Ile	Ala	Gln	Tyr	Ser	Tyr	Val	Leu	Gly	Glu
398			260						265					270		
400	Leu	Glu	Lys	Arg	Ala	Lys	Ala	Gly	Lys	Arg	Leu	Ala	Phe	Val	His	Leu
402			275					280					285			
404	Val	Glu	Pro	Arg	Val	Thr	Asp	Pro	Ser	Leu	Val	Glu	Gly	Glu	Gly	Glu
406		290					295					300				
408	Tyr	Ser	Glu	Gly	Thr	Asn	Asp	Phe	Ala	Tyr	Ser	Ile	Trp	Lys	Gly	Pro
410	305					310					315				320	
412	Ile	Ile	Arg	Ala	Gly	Asn	Tyr	Ala	Leu	His	Pro	Glu	Val	Val	Arg	Glu
414				325						330					335	
416	Gln	Val	Lys	Asp	Pro	Arg	Thr	Leu	Ile	Gly	Tyr	Gly	Arg	Phe	Phe	Ile
418			340						345					350		
420	Ser	Asn	Pro	Asp	Leu	Val	Tyr	Arg	Leu	Glu	Glu	Gly	Leu	Pro	Leu	Asn
422			355					360					365			
424	Lys	Tyr	Asp	Arg	Ser	Thr	Phe	Tyr	Thr	Met	Ser	Ala	Glu	Gly	Tyr	Thr
426		370					375					380				
428	Asp	Tyr	Pro	Thr	Tyr	Glu	Glu	Ala	Val	Asp	Leu	Gly	Trp	Asn	Lys	Asn
430	385					390					395				400	

438 <210> SEQ ID NO: 4

441 <211> LENGTH: 30

444 <212> TYPE: PRT

447 <213> ORGANISM: Saccharomyces carlsbergensis

453 <400> SEQUENCE: 4

456 Met Pro Phe Val Lys Asp Phe Lys Pro Gln Ala Leu Gly Asp Thr Asn

458 1 5 10 15

460 Leu Phe Lys Pro Ile Lys Ile Gly Asn Asn Glu Leu Leu His

462 20 25 30

470 <210> SEQ ID NO: 5

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Input Set : N:\Crf3\RULE60\10055430.txt

Output Set: N:\CRF3\02132002\J055430.raw

473 <211> LENGTH: 25

476 <212> TYPE: DNA

479 <213> ORGANISM: Artificial sequence

486 <220> FEATURE:

488 <223> OTHER INFORMATION: Description of artificial sequence: synthetic

oligonucleotide

494 <400> SEQUENCE: 5

497 ggaattcatg ccatttggtta aggac

25

506 <210> SEQ ID NO: 6

509 <211> LENGTH: 25

512 <212> TYPE: DNA

515 <213> ORGANISM: Artificial sequence

522 <220> FEATURE:

524 <223> OTHER INFORMATION: Description of artificial sequence: synthetic

oligonucleotide

530 <400> SEQUENCE: 6

533 ctctagatta gagcttcttc gtacg

25

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